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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/694,425

10/27/2003

Eduard Kogan

1400-9 CIP (1541X)

3354

7590

10/17/2005

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EXAMINER

TRAIL, ALLYSON NEEL

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,425

Applicant(s)

KOGAN ET AL.

Examiner

Allyson N. Trail

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/27/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Amendment

1. Receipt is acknowledged of the Amendment filed July 26, 2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 5, 9, 14, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (4,957,348) in view of Sanner (4,874,933).

May teaches the following in regards to claims 1, 9, 14, and 18:

"Apparatus that enables an optical transceiver (14) to communicate data as a bar code reader or by way of modulated light. A lens assembly (22) adjusts the focal distance of the optical transceiver (14) to enable it to communicate in these multiple modes." (Abstract).

Figure 3A shows a lens assembly 22, which includes a rotatable wheel 32 having a plurality of lenses for placing each lens in an optical axis of the fixed lens 33 to adjust the focal distance. A lens 34, for example, may refocus the transceiver 14 at a focal distance of approximately one meter. A second lens 36 may refocus the transceiver at infinity. A third lens 38 may be neutral so that the transceiver 14 remains focused for bar code reading. A fourth lens 40 may be colored to filter out interference from sunlight or overhead lighting.

Figure 1 further illustrates a photodetector 27 and a microprocessor 12 which interprets the signal data as bar code data in this mode.

May teaches the following in regards to claims 2 and 15:

The apparatus includes a "focusing means such as a lens assembly 22 is mounted adjacent to the transceiver 14 for adjusting the transceiver's focal distance, defined as the distance at which light rays emitted from or received by the transceiver are focused." (Col. 2, lines 49-61).

"The strobed LED samples the bar code using a sampling technique known in the art." (Col. 4, lines 41-42).

May teaches the following in regards to claim 5:

"A control circuit (16) and microprocessor (12) are coupled to the optical transceiver (14) and are responsive to the focal distance setting of the lens assembly (22) for selecting the appropriate communication mode." (Abstract).

May's teachings above fail to teach the adjusting the distance between the imaging optics assembly and the assembly for receiving and processing image data.

Sanner teaches the following in regards to claim 1, 14, and 18.

Claim 5 discloses adjusting the distance between the lens and the image sensor for focusing purposes.

In view of Sanner's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine May's method of pivoting the lens assembly relative to the assembly for receiving and processing image data in order to achieve focus, with Sanner's method of adjusting the distance between the lens and

the image sensor also for the purpose of focusing. One would be motivated to in addition to pivoting the lens assembly, which is taught by May, also varying the distance between the lens assembly and the CCD as is taught by Sanner. One would be motivated to do so in order to achieve a higher degree of focusing. Both pivoting the lens assembly and adjusting the distance between the two assemblies will achieve a greater level of focus.

4. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (4,957,348) in view of Sanner (4,874,933).

May's teachings in combination with the teachings of Sanner are discussed above. The combination fails to specifically teach what degree the image optics assembly is rotated.

May does however teach the imaging optics to include lenses contained in a rotating wheel. It is clear that the wheel rotates one degree at a time. Additionally, when the imaging optics are rotated, a linear adjustment must occur. The amount of adjustment is a matter of design choice.

One would be motivated to adjust the imaging optics by one degree in order to only slightly adjust the focus on the target image. Pivoting the imaging optics is done to focus the optics on the image in order to achieve an accurate reading of the optical code. One would want to only slightly pivot the optics in order to obtain the exact rotation that is needed to obtain the clearest focus.

5. Claims 3, 4, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (4,957,348) in combination with Sanner (4,874,933) and in further view of Bobba et al (6,223,986).

May's teachings in combination with the teachings of Sanner are discussed above. The teachings however fail to disclose an aiming beam for assisting a user in aiming the optical code reader on the target image.

Bobba et al teaches the following in regards to claims 3, 4, 16, and 17:

"A data reading systems including an aiming aid system which creates a highly visible target or image in the scan volume at a preferred location for placement of the article to be scanned." (Abstract).

"Though the aiming aid is particularly useful for overhead scanners and other fixed scanners, the aiming aid may also be employed by other data reading systems including: CCD readers, video readers, portable or handheld scanners (laser based, LED or CCD), combination fixed/portable scanners." (Col. 6, lines 3-7).

"...the aiming aid is created by directing a laser beam onto a scanning mirror positioned on top of the polygon mirror generally along the rotational axis of the polygon mirror and then directing that beam out into the scan volume in the desired pattern, such as a circular aiming aid. Alternately, the aiming aid may be a multi-dimensional graphical image formed by holographic or diffractive optics." (Abstract).

In view of Bobba et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a laser aiming beam to aid a user in aiming the optical code reader onto the target image. As Bobba et al teaches,

one would be motivated to use an aiming beam when an object is located a far distance from the optical code reader. Over longer distances, scan lines become diffuse such that they are not readily visible on a target, making it difficult for the operator to properly aim the scanner at the target or effectively manipulate the target to be read. An aiming beam would make it easier for the user to see the target and scan properly.

6. Claims 6-8, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over May (4,957,348) in combination with Sanner (4,874,933) and in further view of Sautter et al (6,230,976).

May's teachings in combination with the teachings of Sanner are discussed above. The combination however fails to teach a motor for pivoting the imaging optics assembly.

Sautter et al teaches the following in regards to claims 6-8, 19, and 20:

"The mirror 212 is oscillated or dithered about pivot point 210 via dithering motor 218. While the dithering motor 218 may comprise an array of different components and configurations, figs. 4-6 illustrate a dithering motor 218 that includes permanent magnets 220, 221 disposed on opposite sides of the mirror 212. Electromagnetic drive coils 222, 223 as controlled by a suitable controller drive the permanent magnets. When engaged, the dithering motor 218 bends flexure 208, resulting in rotation of the mirror 212 about an axis substantially parallel to the mirror 212, perpendicular to the plane of FIG. 4."

In view of Sautter et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a motor to pivot the imaging

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optics assembly as taught by Sautter et al. May teaches a rotating wheel including lenses for adjust the focus of the imaging optics assembly on a target image. The manor in which the rotating wheel is rotated is not taught. One would be motivated to use a motor to pivot the wheel in order to mechanically pivot the imaging optics at a controlled speed.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over May (4,957,348) in combination with Sanner (4,874,933) in further view of Gurevich et al (2002/0011520).

May's teachings in combination with the teachings of Sanner are discussed above. The combination however fails to specifically teach the chassis being formed of zinc.

Gurevich et al teaches the following in regards to claim 10:

"The focusing stability of a conventional laser assembly of a bar-code scanner is affected mainly by thermal expansion of the housing. This is especially true when using, in high volume production, cast metal components (for example, cast zinc) having a large thermal expansion coefficient. Thermal focusing shift then becomes a limiting factor of high-end bar-code scanner performance." (Page 11, paragraph 0164).

In view of Gurevich et al's teachings it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a zinc chassis for the optical code reader. As Gurevich et al explains above, cast metal components are best to avoid thermal expansion, which can cause a focusing problem. Also a zinc chassis is strong and is less likely to break or damage.

Response to Arguments

8. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. The current amendment has added the limitation of adjusting the distance between the imaging optics assembly and the assembly for receiving and processing image data. Sanner teaches this new limitation. As discussed above, one would be motivated to combine May's teachings with the teachings of Sanner in order to provide multiple means for clearly focusing the imaging optics assembly on a target image.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Sugiura et al (4,136,821) and Uchimura et al (5,602,379).


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Allyson N. Trail* whose telephone number is (571) 272-2406. The examiner can normally be reached between the hours of 7:30AM to 4:00PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax phone number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [allyson.trail@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Allyson N. Trail
Patent Examiner
Art Unit 2876
October 10, 2005


JARED J. FUREMAN
PRIMARY EXAMINER